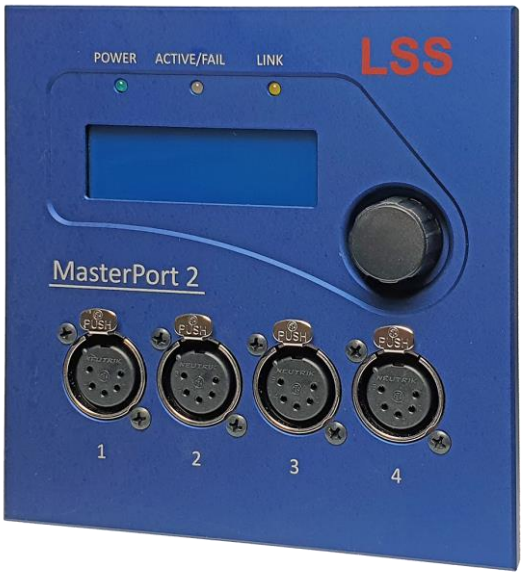
LSS



MasterPort 2

Universal DMX / RDM network node

The LSS MasterPort 2 is an RDM-capable DMX/Ethernet network node for sophisticated lighting networks. It can be used to convert lighting data between Ethernet and DMX. Up to four DMX universes are supported. Up to four transmitters can be merged in each universe, either HTP or LTP. In addition to DMX512, the MasterPort 2 supports all common network protocols, in particular sACN and Art-Net 4.

The ports of the LSS MasterPort 2 can be individually set as DMX In or DMX Out via the port configuration, regardless of whether the socket is physically an In or Out. The signals at the In port are sent to the network according to the selected network protocol. The LSS MasterPort 2 can also send and receive via Ethernet using different protocols.

The LSS MasterPort 2 is explicitly designed for use close to the stage: It has a fanless design and is therefore completely silent. The device can be set completely locally via a 20x4 character LED display. A powerful menu system is available for this purpose, which is operated intuitively using the encoder wheel. The display itself can be switched off, as can the signal LEDs on the front.

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However, the LSS MasterPort 2 can also be completely configured using the LSS configuration software ConfigStudio. The local menu system and configuration software are constantly being developed and adapted to growing requirements.
Firmware updates can be installed via ConfigStudio. The latest update files can always be found on the LSS website.

The range of features of the LSS MasterPort 2 includes support for multicast DNS (mDNS) as well as RDMnet. Integration into broadcast domains and VLAN is possible.

The RDM functionality can be switched on for each Out port. Different interval times can be set for RDM discovery. Incremental discovery can also be carried out in background mode. The data collected from the connected RDM devices can be shown on the display or forwarded via RDM over Ethernet.

The LSS MasterPort 2 is equipped with extensive log functionality for troubleshooting. Message priorities and log destinations (e.g. Telnet or Syslog) and up to 32 log sources can be selected.

The built-in device is powered via PoE or 24 V DC. In the mobile version, the LSS MasterPort 2 can also be operated with 230 V AC using an internal power supply unit.

The LSS MasterPort 2 is available in various designs. Either as a built-in device for wall installation or installation in offset boxes with a minimum installation depth of 80 mm or as a portable version with integrated power supply. These two designs can be supplied with different DMX connection configurations. The following configurations are possible: 4x DMX-In, 4x DMX-Out or 2x DMX-In/2x DMX-Out.
Another design is the MasterPort 2 plugless. It has no sockets on the front and is only connected internally to the DMX network.

Technical data

General

Standards	USITT 1990, DIN 56930-2, ANSI E1.11, ANSI E1.20, ANSI 1.37-1(2012), ANSI 1.37-2(2021), ANSI 1.37-7(2019)	
Ports	Front side:	4x 5-pin XLR, electrically isolated optional male oder female (see connection scheme)
	Back side:	4x 3-pin connectors RM3,81 Phoenix for DMX (Option) 1x 3-pin connector RM5,08 Phoenix for power supply 1x RJ45 according to IEEE 802.3af for PoE-Ethernet

Regardless of the connection configuration, the DMX connections can be defined as inputs or outputs in the settings.

DMX

DMX protocol	DMX512-A	
Baud rate	250 kbps	
Termination	Factory set internal	
Send (DMX-Out)	Start code:	0 (Light), CCh (RDM)
	Protocol length:	Start code + 2…512 values
	Minimum protocol time:	22,4 ms
	Sent Protocols / s:	3…44
	Break length:	90…42280 µs (settable)
	Mark After Break:	10…42280 µs (settable)
	Delay after Start code:	25 µs (if Framerate is set lower than 44)
Receive (DMX-In)	Start code:	0 (Light), CCh (RDM)
	Minimum protocol length:	only start code
	Max. Protokolllänge	Start code + 512 values (values greater than 512 will be lost)
	Throughput delay:	44 µs … 22,5ms
	Maximum distance between protocols:	2s
	Break length:	48µs … 1,95s

Ethernet

Speed:	10 MBit/s, 100MBit/s; Autonegotiation	
Duplex mode:	Auto-MDI/MDIX	
Notification:	Link LED, Data LED, Speed und Duplex mode will show up on the Display.	
Light protocols:	Art-Net 4 (ArtisticLicence), AVAB-IPX (AVAB, transtechnik, LDDE,..), AVAB/UDP (transtechnik), ShowNet (Strand Lighting) sACN (ANSI E1.31 R2018), sACN DD Priority-per-Channel, RDM-Net ANSI E1.33 (2019)	
Further network protocols:	ARP, TCP/IP, IPX, UDP, IGMPv2, Syslog, mDNS, Telnet	
Receive	Maximum packet rate:	>1000/s (with 1 Light frame/packet)
	Throughput delay	4 µs … 22,7 ms
Send	Transmission rate with value change:	Maximum 20ms
	Transmission rate without value change:	20ms … 4s (settable)

Cable cross-sections of the connections on the rear

	Solid in mm^2	Flexible in mm^2	Electric wire ferrule in mm^2	
			Insulated	Uninsulated
DMX	0,14…1,5	0,14…1,5	0,25…1,5	0,25…0,5
Power supply CPU	0,14…2,5	0,14…2,5	0,25…2,5	0,25…1,5

IP Code / Appliance classes

Built-in devices	IP00 / Class III
Portable	IP20 / Class I

Ambient temperature and humidity

Temperature:	0 °C - +40 °C (operation and storage)
Humidity	20 – 90%, not condensed
RoHS	Approval

Material

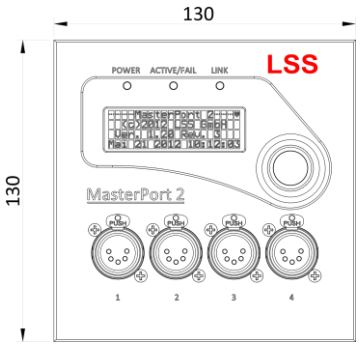
Front panel	Aluminum, blue powder coated
Protective cage built-in devices	1 mm aluminium, bare
portable	1 mm sheet steel, powder-coated black (RAL9005)

LSS MasterPort 2 built-in device

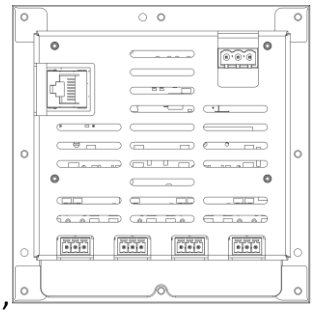
LSS MasterPort 2 for installation in

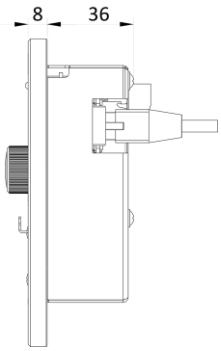
- Junction boxes,
- 19'' rack,
- LSS Duct 180 x 120 and 250 x 140
- LSS Duct VK-Profil 155,
- Other cases.

The connection configurations 4x DMX-In, 4x DMX-Out, or 2x DMX-In / 2x DMX-Out are possible for the built-in device. The device version 4x DMX-Out is optionally available with four connections on the back.

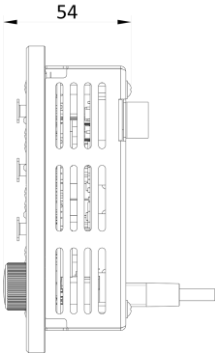


Frontside


Backside with optional connectors



Side



View from above

Technical Specifications

Dimensions (W x H x D)	130 x 130 x 54 mm with Encoder 130 x 130 x 44 mm without Encoder
Installation depth	Minimum 80 mm
Power supply	Optionally: 48 V DC Power over Ethernet (IEEE 802.3af) or 24 V DC via rear connector
Power consumption	130 mA/3 W
Weight	600 g

Order number and connection configuration	5064: Built-in device 2x DMX-In/2x DMX-Out 5065: Built-in device 4x DMX-Out 5066: Built-in device 4x DMX-In The connector design 4x DMX-Out (5065) can also be equipped with DMX connections on the rear. Rear DMX connections cannot be fitted later!

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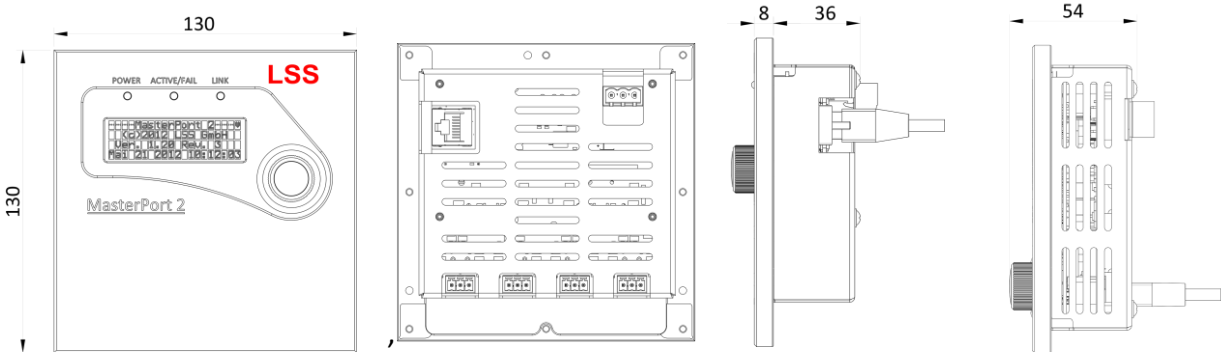
LSS MasterPort 2 plugless

If DMX cabling is implemented via the rear of the LSS MasterPort 2, the front sockets are often not required. In this case, they would also be a source of errors, as unintentional Y cabling would be possible. The solution: leave them out.
The LSS MasterPort 2 plugless was designed precisely for this purpose. The DMX connections are located exclusively on the rear.



Front side | Back side | Side view | View from above

Technical Specifications

Dimensions (W x H x D)	130 x 130 x 54 mm with Encoder 130 x 130 x 44 mm without Encoder
Installation depth	Minimum 80 mm
Power supply	Optionally: 48 V DC Power over Ethernet (IEEE 802.3af) or 24 V DC via rear connector
Power consumption	130 mA/3 W
Weight	600 g

Order number	5065: Built-in device with 4x DMX-Out on the back

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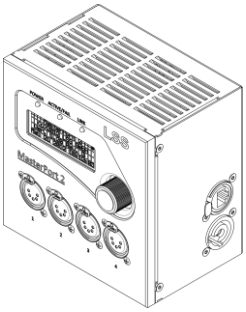
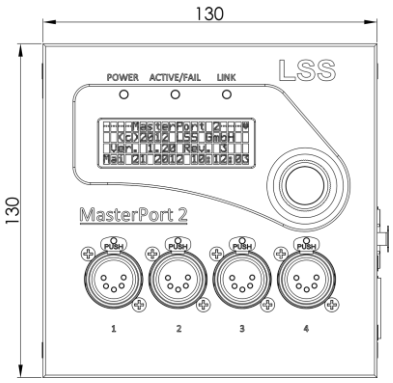
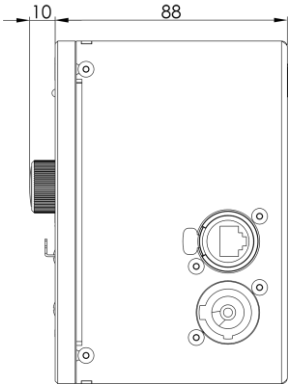
MasterPort 2 portable for decentralized use

LSS MasterPort 2 portable with housing and side Ethernet connection for mounting on walls and other surfaces, including uneven surfaces. A voltage supply of 230 V AC is possible thanks to a built-in switching power supply unit. The connection is made with a Neutrik powerCon® blue.







Technical Specifications

Dimensions (W x H x D)	130 x 130 x 98 mm with Encoder 130 x 130 x 88 mm without Encoder
Power supply	230V AC with internal switching power supply
Power consumption	200 mA/12 W
Weight	1,25 kg

Order number and connection configuration	5064:	Built-in device 2x DMX-In/2x DMX-Out
	5065:	Built-in device 4x DMX-Out
	5066:	Built-in device 4x DMX-In
	L03007	Portable case with Neutrik powerCon® blue and RJ45 connection

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